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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/823,935      | 04/14/2004  | Edward R. Chamberlin | 4317-021            | 5286             |

7590 10/04/2005

Law Office of William B. Ritchie  
43 Jackson Street  
Concord, NH 03301

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| EXAMINER |
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PHAM, TOAN NGOC

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| ART UNIT | PAPER NUMBER |
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2632

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

*Supplemental*  
**Notice of Allowability**

Application No.

10/823,935

Examiner

Toan N. Pham

Applicant(s)

CHAMBERLIN, EDWARD R.

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on April 14, 2004.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20050929.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Examiner's Amendment***

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with William Ritchie on September 29, 2005.

**Examiner's Amendment**

In claim 1, line 20, at the end of "conducting sensor tip at a", insert --first--.

In claim 1, line 23, at the end of "at the", insert --second--.

***Allowable Subject Matter***

Claims 1-4 are allowed.

The following is an examiner's statement of reasons for allowance: The present invention is directed to a liquid level sensor, in particular, the use of a conductance measuring sensor to determine the level of a conductive liquid contained within a vessel. The independent claim identifies the uniquely distinct features, the liquid level sensor comprising "an exposed tip of a bias wire which exits said insulated probe positioned between said attachment end and said sensor end such that a bias voltage at said exposed tip provides a virtual bias voltage circumferential ring around said insulated probe immediately adjacent to said exposed tip; wherein the bias voltage of

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the virtual bias voltage circumferential ring has a polarity opposite of said ground connection wherein the bias voltage corresponds to the voltage of said conducting sensor tip; wherein once the fluid is in contact with said conducting sensor tip at a first predetermined level, a circuit is completed to said ground connection which indicates a "full" condition and wherein if the liquid is not in contact with said conducting sensor tip at the second predetermined level a "not full" condition is indicated, and wherein the bias voltage of said virtual circumferential ring prevents a false indication of a "full" condition by preventing the completion of circuit from said conducting sensor tip to said ground connection via residue on the container walls and said insulated probe even when the liquid is not in contact with said conducting sensor tip". The prior art cited herein fail to anticipate or render the above limitation obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of Arias (US 6,938,478), Queyquep (US 5,907,112), and Jack et al. (US 5,167,769) are cited to show a variety of level sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan N. Pham whose telephone number is (571) 272-2967. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 29, 2005

**TOAN N. PHAM**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Toan Pham', with a long horizontal flourish extending to the right.